

Responsive to the Office Action mailed May 7, 2002, please amend the subject application as follows:

I. REMARKS

In the Office Action dated May 7, 2002, claims 1-9 were pending. Claims 1-9 were rejected.

The following remarks will follow the order set forth in the Office Action.

II. REJECTIONS UNDER 35 U.S.C. §103 OVER JP374482 IN VIEW OF FLESHMAN, BUSHEK, AND DEMELLO

Claims 1, 8, and 9 were rejected under 35 USC §103 as being obvious over Japanese Pat. No. 374482 to Sachibumi Machida in view of US Pat. No. 4,886,471 to Fleshman, further in view of U.S. Patent No. 6,039,685 to Bushek, and further in view of U.S. Patent No. 5,997,320 to DeMello. The propriety of the rejection of each claim will be addressed individually.

A. Claim 1

1. Obviousness to try and modification or combination of references is not the standard

The Examiner is not only combining references but he is also modifying them without any support for doing so. In order to obtain every element of the claim, the Examiner must modify DeMello to obtain the female end of the claimed dummy plug. The DeMello reference, noted by the Examiner, does in fact disclose a connector body having a female end for receiving male pins. However, the "three-elongate sockets 78 are provided in the perforate end face 77 in axial alignment with the three electrically conductive pins 44, 46 and 48 of the connector 19."

(column 4, lines 57-60) As can be clearly seen by the specification, the “female ends” of the connector body 72 are designed to receive electrically conductive pins. The actual dummy plug in the DeMello reference is reference number 80, and there is no reference to the dummy plug having a female end. In fact, the DeMello reference has the exact problem that the invention is trying to avoid. The DeMello reference includes both a dummy plug 80 and a dummy receptacle 78, instead of having one dummy plug that can accept both male and female ends. There is no support in any of the cited references for a dummy plug with a female end, which can receive a male end, as well as replace either a male or female connector.

The Examiner is also modifying the Fleshman reference to obtain the durometer recitation of claim 1. Claim 1 clearly recites that the durometer is 18, whereas the Fleshman reference does not recite less than a 50 durometer. A prima facie case of obviousness is not made out when two references are improperly combined and then modified further to meet the limitations of the claim in issue.

2. All claim limitations must be considered

35 USC §103 requires that the subject matter as a whole be reviewed. There are certain limitations of amended claim 1 which are still not shown in the combination proposed by the Examiner. For example, none of the cited references discloses a female end as recited in amended claim 1. The Examiner states that, “It would have been obvious to construct the dummy plug of JP 374482 ...by modifying the second end of the JP374482 to be a female end as taught by DeMello for covering a male pin when the male pin is not in use” (page 3, paragraph 3). However, as noted in the preceding section, the DeMello reference does not disclose a female end for a dummy plug, and in fact, teaches the very thing that the invention is designed to avoid.

Also, none of the references discloses a dummy plug being made of 18 durometer inherently lubricant silicon, as recited in amended claim 1. The Examiner states that Fleshman teaches the plug connector body having about 50–70 durometer in column 8, line 47. However, Fleshman does not disclose any durometer less than 50. Therefore, Fleshman does not disclose 18 durometer inherent lubricating silicon as recited on amended claim 1. The Japanese patent references a dummy plug that is comprised of two materials bonded together. The plug appears to be a rubber to plastic assembly, although no specific materials are mentioned. However, it would be assumed, by one ordinarily skilled in the art, that the stem would have to be made from a rigid material, unlike silicone, in order for the plug to function properly. The plastic portion of the Japanese reference promotes rigidity and when in use, makes for an easy solution to the problem of keeping the seal in place during its application. The rigid plastic of the plug, when hooked to the latch arm, would solidly prevent any backing out of the plug from the connector. Because of silicone's nature to deform and bend, if the plastic in the Japanese reference were replaced by low-durometer silicone, the dummy plug would simply not work in its application. The present invention represents a geometrically unique solution. It is the geometry, combined by with the material and design, that makes the one part, one material assembly possible. According to 35 USC §103, it must be considered and given proper weight if the correct result is to be reached.

3. Prior art does not teach the source of the problem

The Office Action takes the position that it would have been obvious to modify the references, and in particular the Japanese reference, to include a female dummy plug. However, none of the references mentions the problem of replacing a female and/or male connector with one single type of dummy plug. In fact, the DeMello reference has both female and male dummy plugs to receive the male pins, or to be inserted into female ends. As mentioned before, the DeMello reference is an excellent example of the prior art that the invention was designed to avoid. The present invention has the advantage of being able to allow manufacture of one type of dummy plug that can be used to replace any type of connector, whether it is male or female. The prior art clearly does not teach the source of the problem and therefore could not be said to teach its solution.

B. Claims 8 and 9

The arguments made above regarding claim 1 apply equally to claims 8 and 9 and are incorporated herein by reference.

III. REJECTIONS UNDER 35 U.S.C. §103 OVER JP374482 IN VIEW OF DEMELLO

Claims 2-7 were rejected under 35 USC §103 as being obvious over Japanese Pat. No. 374482 to Sachibumi Machida in view of U.S. Patent No. 5,997,320 to DeMello. The propriety of the rejection of each claim will be addressed individually.

A.. Claim 2

1. Obviousness to try and modification or combination of references is not the standard

The Examiner is not only combining references but he is also modifying them without any support for doing so. In order to obtain every element of the claim, the Examiner must modify the DeMello to obtain the female end of the claimed dummy plug. There is no support in any of the cited references for a dummy plug with a female end, which can receive a male end, as well as replace either a male or female connector. DeMello teaches that a female end can be used to cover a male pin when the male pin is not in use. However, this is not the only requirement that the female end of the inventive dummy plug must satisfy. The female end of the inventive dummy plug must be able to receive a pogo pin that tests for presence during assembly. It must also be able to seal the connector when there is not a male pin present.

Also, the female end, through design, must be able to overcome the challenges of silicone material restriction and a more problematic backing out issue. A male head, as shown in the Japanese reference is solid all the way through, and it is less apt to back out during operation. A female head made from deformable silicone promotes backing out and disengagement of the plug of the latch arm, so merely replacing the male head from the Japanese reference with a female head does not present a viable solution. The unique geometric design of the inventive dummy plug addresses all of these issues. Furthermore, the DeMello reference is a rigid material for the female sockets 78, which does not have to overcome the same challenges as the silicone material, and does not have to meet all of the requirements that the inventive dummy plug must satisfy. A prima facie case of obviousness is not made out when two references are improperly combined and then modified further to meet the limitations of the claim in issue.

2. All claim limitations must be considered

35 USC §103 requires that the subject matter as a whole be reviewed. There are certain limitations of claim 2 which are still not shown in the combination proposed by the Examiner. For example, none of the cited references discloses a female end as recited in claim 2. The Examiner states that, It would have been obvious to construct the dummy plug of JP 374482 ...by modifying the second end of the JP374482 to be a female end as taught by DeMello for covering a male pin when the male pin is not in use" (page 3, paragraph 3). However, as noted in the preceding section, the DeMello reference does not disclose a female end for a dummy plug, and in fact, teaches the very thing that the invention is designed to avoid. According to 35 USC §103, it must be considered and given proper weight if the correct result is to be reached.

3. Prior art does not teach the source of the problem

The Office Action takes the position that it would have been obvious to modify the references, and in particular the Japanese reference, to include a female dummy plug. However, none of the references mentions the problem of replacing a female and/or male connector with one single type of dummy plug. In fact, the DeMello reference has both female and male dummy plugs to receive the male pins, or to be inserted into female ends. As mentioned before, the DeMello reference is an excellent example of the prior art that the invention was designed to avoid. The present invention has the advantage of being able to allow manufacture of one type of dummy plug that can be used to replace any type of connector, whether it is male or female. The prior art clearly does not teach the source of the problem and therefore could not be said to teach its solution.

B. Claims 3-7

The arguments made above regarding claim 2 apply equally to claims 3-7 and are incorporated herein by reference.


IV. CONCLUSION

In response to the Office Action dated May 7, 2002, arguments have been provided in response to the Examiner's rejections. At this point, applicant believes that the claims remaining in the case distinguish over the art cited and comply with the requirements of 35 U.S.C. §102, §103, and §112. As such, allowance of the claims is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the required fee or to credit any overpayment to Deposit Account No. 50-1210.

Respectfully submitted,

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